CLAIMS

1) A two-arm belt tensioner (16) for a belt drive (1) of an internal combustion engine (3); the belt tensioner (16) comprising a tubular supporting portion (20) fixed to a fixed supporting structure (6); a first (24) and a second (23) arm fitted to said tubular supporting portion (20) to rotate about a common hinge axis (21); a first (25) and a second (26) idle wheel fitted to respective ends (28) of said first (24) and said second (23) arm and cooperating with respective branches (12)(13) of a belt (11) of said drive; and elastic forcing means (33) for forcing said first (24) and said second (23) arm towards each other to keep said wheels (25)(26) in contact with said respective branches (12)(13) of the belt (11); characterized in that said elastic forcing means (33) comprise a torsionally elastic elongated member (34) extending through said tubular supporting portion (20), coaxially with the hinge axis (21), and having respective opposite end portions (37)(38) projecting outwards of said tubular supporting portion (20); a first (40) and a second (41) end cap located at opposite axial ends of said tubular supporting portion (20), and each fitted in angularly fixed manner to a respective said end portion (37)(38); said second cap (41) being fitted directly with one end (31) of said second arm (23), and defining a radial opening (46) fitted through with said

first arm (24); angular connecting means (43; 51) being interposed between said first arm (24) and said first cap (40), and housed inside said tubular supporting portion (20) and said first and said second cap (40)(41).

2) A belt tensioner as claimed in Claim 1, characterized by comprising axial locating and locking means (40, 41, 45) for keeping said elongated torsionally elastic member (34) and said first and said second arm (24)(23) in axially fixed positions with respect to said tubular supporting portion (20); said axial locating and locking means comprising said first 840) and said second (41) cap.

3) A belt tensioner as claimed in Claim 2, characterized in that said axial locating and locking means comprise two shoulders (45) carried by said second cap (41); said second arm (23) resting on said shoulders and being forced onto said second cap (41).

4) A belt tensioner as claimed in one of the foregoing Claims, characterized in that said first (40) and said second (41) cap are force fitted onto the respective end portions (37)(38) of said elongated torsionally elastic member (34).

5) A belt tensioner as claimed in any one of the foregoing Claims, characterized in that said tubular supporting portion (20), said first cap (40), and at least part of said second cap (41) are housed completely or lie within a straight cylindrical surface

(K) parallel to the hinge axis (21); an intermediate portion of said cylindrical surface (K) being defined by an outer lateral surface of said tubular supporting portion (20).

6) A belt tensioner as claimed in any one of the foregoing Claims, characterized in that said angular connecting means comprise a torsionally rigid tubular sleeve (43) connected integrally to said first cap (40) and having an end portion (43a) engaging said second cap (41) in rotary manner about said hinge axis (21); said first arm (24) being connected integrally to said end portion (43a) of the tubular sleeve.

7) A belt tensioner as claimed in Claim 6, characterized in that said angular connecting means comprise a further torsionally elastic member (51).

8) A belt tensioner as claimed in Claim 7, characterized in that said further torsionally elastic member (51) extends parallel to said elongated torsionally elastic member (34), and is connected to said first arm (24) and to said first cap (40) in parallel with said elongated torsionally elastic member (34).

9) A belt tensioner as claimed in Claim 8, characterized in that said further torsionally elastic member comprises at least one wire torsion spring (51) surrounding said elongated torsionally elastic member (34).

10) A belt tensioner as claimed in any one of the

foregoing Claims, characterized in that said elongated torsionally elastic member (34) comprises a number of elongated bodies (35) having the same cross section.

11) A belt tensioner as claimed in Claim 10, characterized in that said elongated bodies (35) have a substantially circular cross section.

12) A belt tensioner as claimed in Claim 10, characterized in that said elongated bodies (35) have a triangular cross section with substantially equal sides.

13) A belt tensioner as claimed in any one of the foregoing Claims, characterized in that said first (24) and said second (23) arm each comprise two contoured portions (27) of the same shape and size.

14) A belt tensioner as claimed in Claim 13, characterized in that said contoured portions (27) of each arm extend on opposite sides of a relative central plane (P) of symmetry of the relative wheel (25)(26), which plane is perpendicular to the axis of rotation of the relative said wheel.

15) A belt tensioner as claimed in Claim 13 or 14, characterized in that said contoured portions (27) are made of pressed sheet metal.

16) A belt tensioner as claimed in Claim 14 or 15, characterized in that said contoured portions contact, and are connected integrally to, each other.

17) A belt tensioner as claimed in one of Claims 13 to 16, characterized in that the contoured portions

of each arm define at least one end fork (28) having respective arms (28a); each arm of the end fork having a relative cylindrical projection (28b) forming part of a hinge pin coaxial with a relative axis (A) and to which the relative wheel (25, 26) is mounted to rotate about the relative axis (A).